

September 15, 2014

Rajinder Sahota
Chief, Climate Change Program Planning & Management Branch
California Air Resources Board
1001 I Street
Sacramento, CA 95812-2828

Re: Pacific Gas and Electric Company's Comments on the Air Resources Board Proposed Amendments to the Regulation for the Mandatory Reporting of Greenhouse Gas Emissions and Cost of Implementation Fee Regulation

Dear Ms. Sahota:

Pacific Gas and Electric Company (PG&E) appreciates the opportunity to comment on the Air Resources Board's (ARB) proposed amendments to its Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (MRR) and the Cost of Implementation (COI) Fee Regulation.

I. INTRODUCTION

PG&E supports the ARB's effort to update the MRR and COI regulations. In developing the amendments, ARB staff presented its initial ideas for discussion at a public workshop held on June 5. PG&E participated actively at the workshop and incorporates its comments by reference.¹ PG&E acknowledges that these comments were addressed and thanks ARB staff for considering them.

The comments included here address issues identified in new language introduced in these proposed amendments.

A. Mandatory Reporting Regulation**1. MRR Section 95103(h) and Section 95153(m)(1)(A)
GHG Reporting Requirements for Centrifugal Compressors: Engineering Estimates Are Appropriate for De Minimis Emissions Levels When Cost outweighs Benefit**

PG&E supports investment in its system that increases safety, reduces fugitive emissions, and assists in accurate emission reporting. The proposed amendments appear to require PG&E to install meters to measure spin-up gas used to start centrifugal compressors. PG&E believes that the costs of installing meters outweigh the benefits and recommends

¹ Krausse, M. 2014. *Informal Comments on the Air Resources Board's Proposed Changes to the GHG Mandatory Reporting Regulation*. Pacific Gas and Electric. Retrieved from <http://www.arb.ca.gov/lists/com-attach/2-mrr-2014-ws-UyMHZlw4Aw8GYwNs.doc>

that the ARB continue to use engineering estimates for centrifugal compressor start-ups, as explained below.

In crafting reporting requirements, ARB should weigh the cost of additional measurement (i.e., the cost of installing meters) against the benefit of greater accuracy (i.e., a better foundation for policy and regulatory design). Currently, engineering estimates are based on the spike in fuel flow rate data during compressor start-up. PG&E believes that this presents an accurate estimate of the non-covered vented emissions because both the amount of gas is known as well as the time period of the start-up. Additionally, engineering estimates are based on conservative assumptions that tend to result in slightly higher emissions than actual measured emissions.

Finally, while installing meters might offer slightly improved accuracy, the benefit would be limited because start-ups represent a small fraction of overall emissions for a facility. For example, PG&E estimates that the total annual vented emissions from compressor spin-up gas at its Burney Compressor Station is 37 metric tons of carbon dioxide equivalent (CO₂e) or less than 0.1 percent of facility total yearly emissions. PG&E estimates installation costs to be approximately \$100,000 for each meter, not counting ongoing maintenance expense. Given limited potential improvement in data accuracy, the costs associated with installing new meters appear unjustified.

Accordingly, PG&E proposed the following regulatory language to address this issue:

Amend section 95103(h) as follows:

~~(h) **Reserved** Reporting in 20154 All provisions of the regulation are in full effect for 2014 data reporting in 2015 and beyond, except the following: For 2013 data reported in 2014, the following applies:~~

~~(1) Operators in the petroleum and natural gas systems sector subject to section 95103(m)(1)(A) for centrifugal compressor start-ups, may use best available methods to calculate emissions for 2014 data reported in 2015.~~

Amend section 95153(m)(1)(A) as follows:

~~(A) Operating mode, blowdown valve leakage through the blowdown vent, wet seal and dry seal compressors. For all centrifugal compressor start-ups where natural gas is used as spin-up or starting gas (i.e. not combusted in the compressor), venting of this gas must be quantified and reported as follows:~~

$$ESGi = \sum Vs(1-CF)Yi \quad \text{(Eq. 20)}$$

~~- Where:~~

~~ESGi = Annual GHGi (CO₂ and CH₄) vented emissions at standard conditions in cubic feet.~~

~~n = number of compressor start-ups using spin gas.~~

Vsg = Volume of spin-up gas in standard cubic feet **through metering or estimated using engineering data.**

CF = Fraction of spin-up gas that is sent to vapor recovery or fuel gas as determined by keeping logs of the number of operating hours for the vapor recovery system and the amount of gas that is directed to the fuel gas or vapor recovery system.

Yi = Mole fraction of GHGi in the vent gas.

Calculate both CH₄ and CO₂ mass emissions from volumetric emissions using calculations in paragraph (t) of this section.

2. Section 95102(a)(345)—Scope and Definition of Natural Gas Pipeline Dig-ins: Reporting Should Focus On Distribution System Emissions

To ensure reporting consistency and avoid double-counting, PG&E recommends that ARB clarify that Section 95102(a)(345) applies to distribution pipelines, as described below.

The proposed amendments add Section 95102(a)(345), which defines a “pipeline dig-in” as any “unintentional puncture or rupture to a buried natural gas pipeline during excavation activities.” The applicable source category within the regulation (Section 95150[a][8]) includes emissions from the **natural gas distribution systems** (*emphasis added*) that are operated by a Local Distribution Company (LDC) and specifically excludes emissions from the natural gas transmission system which are addressed in Section 95122. Although Section 95152(i)(11) was added to include reporting GHG emissions from dig-ins under the natural gas distribution source category, PG&E is concerned that if the requirement is extended to transmission system dig-ins, the emissions from the entire natural gas distribution will be overestimated.

PG&E recommends the following amendment in the definition to ensure clarity:

“Pipeline dig-in” means unintentional puncture or rupture to a buried natural gas ***distribution*** pipeline during excavation activities.

3. Section 95152(i)(9)—Reporting Natural Gas Distribution Emissions: Clarify What “Equipment Leaks” are to be Reported

This provision requires emissions to be reported for “Equipment leaks and pipeline blowdowns.” Sections 95152(i)(1) – (5) address the various equipment leaks that can be found in the distribution system, such as above-grade transmission and distribution (T-D) stations, above and below ground metering and regulating (M&R) stations, and distribution main equipment leaks.

PG&E seeks clarification on what additional equipment leaks need to be reported in 95152(i)(9).

B. Cost of Implementation Fee Regulation

1. MRR Section 95122(d)(2)(E)—Data Reporting for Local Distribution Companies: Language Clarification And Consistency With Cost of Implementation Fee Regulation

PG&E requests clarification or makes recommendations as follows for this section, which impacts both the MRR and COI:

- a. The proposed amendments require local distribution companies to provide “the annual energy in MMBtu [million British thermal units] delivered to residential, commercial, industrial, electricity generating facilities, **and other end-users** (emphasis added) not identified as residential, commercial, industrial or electricity generating facilities.” PG&E supports ARB’s goal to include the data required to support the COI within this MRR report. PG&E requests clarity to understand what sources are included in “other end-users” in the proposed amendment.
- b. PG&E requests clarity on reporting California end-user data. The Energy Information Administration (EIA)-176 data required per 40CFR§98.406(b)(13) are reported in million standard cubic feet (MSCF). It is unclear what conversion factors would be applied to convert MSCF into MMBtu. Additionally, PG&E’s billing system uses Therms as the unit of measure for customer deliveries. Billing data, when parsed into the proposed four customer data categories, will not be consistent with the EIA report.
- c. PG&E requests clarity on how PG&E customers who pass the natural gas to other facilities will be reported (e.g. Sacramento Municipal Utility District) to ARB.

2. COI Fee Regulation Applicability to Electricity Generating Facility

To ensure that the appropriate fee is being paid, PG&E recommends that ARB include language that allows dual-fuel electricity generating facilities to subtract the net power generated by the facility from California diesel fuel, as described below.

PG&E owns and operates the Humboldt Bay Generating Station (HBGS) that uses ten California diesel and natural gas dual-fuel reciprocating engines with a nominal output of 163 megawatt (MW). HBGS pays a COI fee for every gallon of diesel received *and* for each megawatt-hour (MWh) of net power generated by the facility. This results in excess COI fees being paid annually by the facility. Although normal operation only results in 1 to 2 percent of the power being generated from diesel fuel, there may be situations when natural gas supply is curtailed and electricity generating units will operate for an extended period on diesel fuel. To ensure that the appropriate fee is being paid, PG&E recommends that ARB include language that allows dual-fuel electricity generating facilities to account for the net power generated by the facility from California diesel fuel.

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C. CONCLUSION

Thank you for the opportunity to submit these comments on the proposed amendments for the MRR and COI. PG&E looks forward to continuing to work with ARB to ensure the successful implementation of both regulations.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark C. Krausse", with a long horizontal flourish extending to the right.

Mark C. Krausse
Senior Director, State Agency Relations

Cc: Brienne Aguila, via email
David Mallory, via email
Patrick Gaffney, via email
Jimmy Steele, via email